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Photo-realistic 3D Head Modeling Using Multi-view Images

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Abstract

In this paper, we present a system for reconstructing photorealistic 3D head models from multi-view images. In the proposed system, we perform two-pass bundle adjustments to reconstruct a photo-realistic 3D head model. At the first pass it computes several feature points of a target 3D head and then use these features to modify a generic head to obtain a rough head model. Next, we perform the second pass bundle adjustment to compute a detailed 3D head model. The texture of head models is obtained from multi-views. After texturing on the reconstructed head models, several preliminary results of photo-realistic 3D head models are demonstrated to verify the proposed system.